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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,992	04/12/2006	Masaharu KURODA	59150-8035	8318

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PERKINS COIE LLP
P.O. BOX 1208
SEATTLE, WA 98111-1208

EXAMINER	
WORLEY, CATHY KINGDON	
ART UNIT	PAPER NUMBER
1638	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,992	KURODA, MASAHARU	
	Examiner	Art Unit	
	CATHY K. WORLEY	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-91* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-91* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 2, 5, 6, 8, and 9, drawn to a nucleic acid molecule having at least 15 contiguous nucleotides complementary to a nucleic acid sequence encoding a prolamin polypeptide.

Group II, claim(s) 3, drawn to a nucleic acid molecule comprising a sequence of at least 15 contiguous nucleotides that are complementary to a sequence encoding a rice prolamin protein.

Group III, claim(s) 4, drawn to a nucleic acid molecule comprising a sequence of at least 15 contiguous nucleotides that are complementary to a sequence encoding a japonica rice prolamin protein.

Group IV, claim(s) 7, drawn to a nucleic acid molecule comprising a sequence of at least 15 contiguous nucleotides that are complementary to a 5' terminal sequence of a sequence encoding a prolamin protein.

Groups V-VIII, claim(s) 10 (in part), drawn to a nucleic acid molecule comprising a sequence of at least 15 contiguous nucleotides that are complementary to a sequence encoding a protein with a specified amino acid sequence; wherein the specified amino acid sequence for groups V-VIII is SEQ ID NO:98-101, respectively. For clarity, the Examiner requests that if the Applicant elects one of the inventions of Groups V-VIII that the Applicant please specify the sequence chosen from SEQ ID NO:98-101 that corresponds to the elected group.

Group IX, claim(s) 11, drawn to a nucleic acid molecule comprising a sequence of at least 15 contiguous nucleotides that are complementary to a sequence encoding a 13 kDa prolamin protein.

Groups X-LV, claim(s) 12 (a) and (b), in part, drawn to a nucleic acid molecule comprising a sequence of at least 15 contiguous nucleotides that are complementary to a sequence encoding a specified amino acid sequence or comprising a specified nucleic acid sequence; wherein, the specified sequence for Groups X-LV is SEQ ID NO: 1-46, respectively. For clarity, the Examiner requests that if the Applicant

elects one of the inventions of Groups X-LV that the Applicant please specify the sequence chosen from SEQ ID NO:1-46 that corresponds to the elected group.

Groups LVI-CI, claim(s) 12 (c) and (d), in part, drawn to a nucleic acid molecule comprising a sequence of at least 15 contiguous nucleotides that are complementary to a sequence encoding a variant of a specified amino acid sequence or comprising an allelic variant of a specified nucleic acid sequence; wherein, the specified sequence for Groups LVI-CI is SEQ ID NO: 1-46, respectively. For clarity, the Examiner requests that if the Applicant elects one of the inventions of Groups LVI-CI that the Applicant please specify the sequence chosen from SEQ ID NO:1-46 that corresponds to the elected group.

Groups CII-CXXIV, claim(s) 12 (e), in part, drawn to a nucleic acid molecule comprising a sequence of at least 15 contiguous nucleotides that are complementary to a sequence encoding a homolog or ortholog of a specified amino acid sequence; wherein, the specified sequence for Groups CII-CXXIV is an even ID number from SEQ ID NO: 2-46, respectively. For clarity, the Examiner requests that if the Applicant elects one of the inventions of Groups CII-CXXIV that the Applicant please specify the sequence chosen from the even ID numbers from SEQ ID NO:2-46 that corresponds to the elected group.

Groups CXXV-CCXXXIX, claim(s) 12 (f), in part, drawn to a nucleic acid molecule comprising a sequence the hybridizes to one of the nucleic acids from groups X-CXXIV. For clarity, the Examiner requests that if the Applicant elects one of the inventions of Groups CXXV-CCXXXIX that the Applicant please specify the sequence chosen from SEQ ID NO:1-46 that corresponds to the elected group, and that the Applicant specify if the nucleic acid hybridizes to the nucleic acid from part (a), (b), (c), (d), or (e) of claim 12.

Groups CCXL-CCCLIV, claim(s) 12 (g), in part, drawn to a nucleic acid molecule comprising a sequence that has at least 70% identity to one of the nucleic acids from groups X-CXXIV. For clarity, the Examiner requests that if the Applicant elects one of the inventions of Groups CCXL-CCCLIV that the Applicant please specify the sequence chosen from SEQ ID NO:1-46 that corresponds to the elected group, and that the Applicant specify if the nucleic acid hybridizes to the nucleic acid from part (a), (b), (c), (d), or (e) of claim 12.

THE INVENTIONS OF GROUPS CCXL-CCCLIV ARE LINKED BY CLAIMS 15-21

Group CCCLV, claim(s) 13 and 14, drawn to a nucleic acid molecule having at least 15 contiguous nucleotides complementary to a nucleic acid sequence encoding a prolamin polypeptide and having antisense activity.

Group CCCLVI, claim(s) 22, drawn to an agent causing RNA interference against a gene sequence encoding a prolamin polypeptide.

Group CCCLVII, claim(s) 26-28, drawn to a nucleic acid cassette comprising a nucleic acid having at least 15 contiguous nucleotides complementary to a sequence encoding a prolamin polypeptide and further comprising a nucleic acid having at least 15 contiguous nucleotides of a sequence encoding a prolamin polypeptide, and further comprising a spacer sequence.

Group CCCLVIII, claim(s) 29-32, drawn to a nucleic acid cassette comprising a nucleic acid having at least 15 contiguous nucleotides complementary to a sequence encoding a prolamin polypeptide and further comprising a nucleic acid having at least 15 contiguous nucleotides of a sequence encoding a prolamin polypeptide, and further comprising a signal cassette.

Group CCCLIX, claim(s) 47 and 48, drawn to a nucleic acid cassette comprising a nucleic acid having at least 15 contiguous nucleotides complementary to a sequence encoding a prolamin polypeptide and further comprising a nucleic acid having at least 15 contiguous nucleotides of a sequence encoding a prolamin polypeptide, and further comprising a terminator sequence.

Group CCCLX, claim(s) 49-51, drawn to a nucleic acid cassette comprising a nucleic acid having at least 15 contiguous nucleotides complementary to a sequence encoding a prolamin polypeptide and further comprising a nucleic acid having at least 15 contiguous nucleotides of a sequence encoding a prolamin polypeptide, and further comprising a foreign gene.

THE INVENTIONS OF GROUPS CCCLVII-CCCLX ARE LINKED BY CLAIM 25

Group CCCLXI, claim(s) 34, drawn to a nucleic acid cassette comprising a nucleic acid having at least 15 contiguous nucleotides complementary to a sequence encoding a prolamin polypeptide and further comprising a foreign gene wherein a promoter sequence is operably linked to both the foreign gene and the nucleic acid.

Group CCCLXII, claim(s) 35-45, drawn to a nucleic acid cassette comprising a nucleic acid having at least 15 contiguous nucleotides complementary to a sequence encoding a prolamin polypeptide and further comprising a foreign gene and further comprising a separate promoter sequence operably linked to both the foreign gene and the nucleic acid.

Group CCCLXIII, claim(s) 46, drawn to a nucleic acid cassette comprising a nucleic acid having at least 15 contiguous nucleotides complementary to a sequence

encoding a prolamin polypeptide and further comprising a foreign gene further comprising a promoter and a signal sequence.

THE INVENTIONS OF GROUPS CCCLXI-CCCLXIII ARE LINKED BY CLAIM 33

THE INVENTIONS OF GROUPS CCCLX-CCCLXIII ARE LINKED BY CLAIM 24

THE INVENTIONS OF GROUPS CCCLVII-CCCLXIII ARE LINKED BY CLAIM 23

Group CCCLXIV, claim(s) 52, drawn to a method for producing a nucleic acid cassette.

Group CCCLXV, claim(s) 53-58, drawn to a vector comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide.

Group CCCLXVI, claim(s) 59, drawn to a vector comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide and further comprising a foreign gene.

Group CCCLXVII, claim(s) 60 and 62-67, drawn to a plant cell comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide.

Group CCCLXVIII, claim(s) 61, drawn to a plant cell comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide and further comprising a foreign gene.

Group CCCLXIX, claim(s) 68 and 70-74, drawn to a plant body comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide.

Group CCCLXX, claim(s) 69, drawn to a plant body comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide and further comprising a foreign gene.

Group CCCLXXI, claim(s) 75, drawn to a plant seed produced from a plant body comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide.

Group CCCLXXII, claim(s) 76, drawn to a plant seed produced from a plant body comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide and further comprising a foreign gene.

Group CCCLXXIII, claim(s) 77, drawn to a starch preparation.

Group CCCLXXIV, claim(s) 78 (in part), drawn to a composition comprising a gene product of the foreign gene produced from a plant body comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide and further comprising a foreign gene.

Group CCCLXXV, claim(s) 78 (in part), drawn to a composition comprising a gene product of the foreign gene produced from a plant seed produced from a plant body comprising a nucleic acid having at least 15 contiguous bases of a nucleic acid encoding a prolamin polypeptide and further comprising a foreign gene.

Group CCCLXXVI, claim(s) 79-82, drawn to a method for reducing an expression amount of a protein in a seed in a plant.

Group CCCLXXVII, claim(s) 83-87, drawn to a method for expressing a foreign gene in a plant seed.

Group CCCLXXVIII, claim(s) 88, drawn to a composition comprising a gene product of the foreign gene produced by a seed of a transgenic plant transformed with a nucleic acid molecule comprising at least 15 contiguous nucleotides complementary to a nucleic acid encoding a prolamin polypeptide.

Group CCCLXXIX, claim(s) 89, drawn to the use of a nucleic acid for reducing expression amount of a protein in a seed of a plant.

Group CCCLXXX, claim(s) 90, drawn to the use of a nucleic acid for expressing a foreign gene in a seed of a plant.

Group CCCLXXXI, claim(s) 91, drawn to the use of a nucleic acid for expressing a foreign gene in a seed of a plant wherein the expression of native proteins of the plant in the seed is reduced.

THE INVENTIONS OF GROUPS I-CCCLXXXI ARE LINKED BY CLAIM 1

It is noted that claim 30 lack antecedent basis for the foreign gene, therefore, the Examiner did not know which group to put claim 30 into. If the Applicant would like to elect claim 30, the Applicant is advised to amend the claim to depend

properly from a claim reciting a foreign gene, and then elect the group which comprises this parent claim.

2. Several of the inventions are linked by linking claims (denoted in bold and capital letters, above). The restriction requirement between the linked inventions is subject to the nonallowance of the linking claims. Upon the allowance of the linking claims, the restriction requirement as to the linked inventions shall be withdrawn and any claims depending from or otherwise including all the limitations of the allowable linking claims will be entitled to examination in the instant application. Applicants are advised that if any such claims depending from or including all the limitations of the allowable linking claims are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant applications. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. In re Ziegler, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP 804.01.

3. The inventions listed as Groups I-CCCLXXXI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking groups I-CCCLXXI is a nucleic acid comprising at least 15 contiguous bases complementary to a sequence encoding a prolamin protein. Mitsukawa et al teach a complete cDNA encoding a prolamin protein (see GenBank Accession AB016505, published on Jan. 9, 1999). The cDNA is a double-stranded molecule, and therefore it comprises the sequence encoding the prolamin polypeptide as well as the full complement which is longer than 15 bases. Therefore, the technical feature linking the inventions of groups I-CCCLXXI does not constitute a special technical feature as defined by PCT Rule 13.2 as it does not define a contribution over the prior art.

Accordingly, Groups I-CCCLXXXI are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept.

4. Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained.

Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder**. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHY K. WORLEY whose telephone number is (571)272-8784. The examiner can normally be reached on M-F 10:00 - 4:00, with additional variable hours before 10:00 and after 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cathy K. Worley/
Patent Examiner, Art Unit 1638